

RECEIVED
CENTRAL FAX CENTER

JUL 02 2007

Application Serial No: 10/089399
Responsive to the Office Action mailed on: February 2, 2007

REMARKS

This Amendment is in response to the Office Action mailed on February 2, 2007. Claims 1, 6 and 13 are amended editorially. Claims 2 and 16 are cancelled. Claims 1 and 13 are amended editorially and are supported, for example, in the specification on page 18, lines 23-28; page 27, lines 20-28 and in Figures 2 and 5. Claim 1 is further amended to include features of cancelled claim 2. Claim 6 is amended to remove a feature now found in amended claim 1. Claim 13 is amended to include features of cancelled claim 16. No new matter is added. Claims 1, 6, 7, 9, 12, 13 and 20 are pending with claims 8, 10, 18 and 19 being withdrawn.

§102 Rejections:

Claims 1, 2, 9, 12-13, 16 and 20 are rejected as being anticipated by either Sugiyama (JP Patent Publication No. 11-166886) or Sugiyama (US Patent No. 6,122,049). This rejection is traversed.

Claim 1 is directed to a liquid homogenizing unit that requires, among other features, a cell, a supply flow path, a first intermediate flow path, and a second intermediate flow path. The first intermediate flow path has a single groove formed in a front surface of the cell, the groove connecting the supply flow path and the second intermediate flow path at the front surface. The groove is also connected to the second intermediate flow path at a position that is unaligned with an axis of the second intermediate flow path. An advantage of these features is that an eddy current can be generated inside the second intermediate flow path, whereby a solute contained in the supplied liquid is positively diffused by the eddy current in the cross section of the second intermediate flow path (see page 9, lines 14-24).

Neither Sugiyama reference discloses or suggests these features. Both references are directed to a liquid chromatograph device/ apparatus that disclose a connection slot/groove (120) comprising symmetrical connection slots/grooves (120A and 120B) (see Figure 3). Fluid supplied through connection slots/grooves (120A and 120B) enter a detection (flow) passage (114) at both left and right sides of the opening of the passage (114). The rejection interprets connection slot/groove (120) and detection (flow) passage (114) as the first intermediate flow path and the second intermediate flow path of claim 1,

Application Serial No: 10/089399

Responsive to the Office Action mailed on: February 2, 2007

connected to the measurement flow path at a position that is unaligned with an axis of the measurement flow path. An advantage of these features is that an eddy current can be generated inside the measurement flow path, whereby a solute contained in the supplied liquid is positively diffused by the eddy current in the cross section of the measurement path (see page 9, lines 14-24).

Neither Sugiyama reference discloses or suggests these features. Both references are directed to a liquid chromatograph device/ apparatus that disclose a connection slot/groove (120) comprising symmetrical connection slots/grooves (120A and 120B) (see Figure 3). Fluid supplied through connection slots/grooves (120A and 120B) enter a detection (flow) passage (114) at both left and right sides of the opening of the passage (114). The rejection appears to interpret connection slot/groove (120) and detection (flow) passage (114) as the eddy current generating path and the measurement flow path of claim 1, respectively. Thus, under this interpretation of the Sugiyama references, connection slots/grooves (120A and 120B) must be grooves of connection slot/groove (120) that connect to detection (flow) passage (114). However, claim 13 requires that the eddy current generating path have a single groove formed in a front surface of the cell, the groove connecting the supply flow path and the measurement flow path at the front surface. The connection slot/groove (120) has more than a single groove and does not suggest a structure that is capable of generating an eddy current inside the passage (114). Thus, the Sugiyama references do not contemplate the benefits of generating an eddy current achieved by having a eddy current generating path having a single groove, the groove connecting the supply flow path and the measurement flow path at the front surface.

Also, the Sugiyama references do not disclose the groove being connected to the measurement path at a position that is unaligned with an axis of the measurement flow path. As stated in the rejection, and shown in Figure 3 of the Sugiyama references, the connection slots/grooves (120A and 120B) intersect the passage (114) at a position aligned with the central axis of the passage (114). Accordingly, even if only one of the connection slots/grooves (120A or 120B) is used for transferring liquid from the connection slot/groove (120) the device/apparatus of the Sugiyama references would still not be able to suggest a structure capable of generating an eddy current inside the passage

Application Serial No: 10/089399
Responsive to the Office Action mailed on: February 2, 2007

respectively. Thus, under this interpretation of the Sugiyama references, connection slots/grooves (120A and 120B) must be grooves of connection slot/groove (120) that connect to detection (flow) passage (114). However, claim 1 requires that the first intermediate flow path have a single groove formed in a front surface of the cell, the groove connecting the supply flow path and the second intermediate flow path at the front surface. The connection slot/groove (120) has more than a single groove and does not suggest a structure that is capable of generating an eddy current inside the passage (114). Thus, the Sugiyama references do not contemplate the benefits of generating an eddy current achieved by having a first intermediate flow path having a single groove, the groove connecting the supply flow path and the second intermediate flow path at the front surface.

Also, the Sugiyama references do not disclose the groove being connected to the second intermediate flow path at a position that is unaligned with an axis of the second intermediate flow path. As stated in the rejection, and shown in Figure 3 of the Sugiyama references, the connection slots/grooves (120A and 120B) intersect the passage (114) at a position aligned with the central axis of the passage (114). Accordingly, even if only one of the connection slots/grooves (120A or 120B) is used for transferring liquid from the connection slot/groove (120) the device/apparatus of the Sugiyama references would still not be able to suggest a structure capable of generating an eddy current inside the passage (114). Thus, the Sugiyama references do not contemplate the benefits achieved by a groove being connected to the second intermediate flow path at a position that is unaligned with an axis of the second intermediate flow path. For at least these reasons claim 1 is not suggested by either Sugiyama reference and should be allowed. Claims 9 and 12 depend from claim 1 and should be allowed for at least the same reasons.

Claim 13 is directed to a high-performance liquid chromatography apparatus that requires, among other features, a column, a detector used for absorbance detection with respect to an eluate from the column. The detector has a cell, a supply flow path, a measurement flow path, and an eddy current generating path for conducting the eluate from the supply flow path into the measurement flow path. The eddy current generating path has a single groove formed in a front surface of the cell, the groove connecting the supply flow path and the measurement flow path at the front surface. The groove is also

Application Serial No: 10/089399
Responsive to the Office Action mailed on: February 2, 2007

(114). Thus, the Sugiyama references do not contemplate the benefits achieved by a groove being connected to the measurement flow path at a position that is unaligned with an axis of the second intermediate flow path. For at least these reasons claim 13 is not suggested by either Sugiyama reference and should be allowed. Claim 20 depends from claim 13 and should be allowed for at least the same reasons.

Conclusion:

Applicants respectfully assert claims 1, 6, 7, 9, 12, 13 and 20 are in condition for allowance. Accordingly, Applicants respectfully request that withdrawn claims 8, 10, 18 and 19 be reinstated. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.



Dated: July 2, 2007

Respectfully submitted,

HAMRE, SCHUMANN, MUELLER &
LARSON, P.C.
P.O. Box 2902
Minneapolis, MN 55402
(612) 455-3800

By: 

Douglas P. Mueller
Reg. No. 30,300
DPM/ahk